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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,677	01/18/2004	Steven A. Gronemeyer	ST00001C1 (217-US-C1)	8617

7590 11/02/2005

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EXAMINER

MULL, FRED H

ART UNIT	PAPER NUMBER
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3662

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/759,677	GRONEMEYER, STEVEN A.	
	Examiner	Art Unit	
	Fred H. Mull	3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-4, 8, 9, 11 and 12 is/are allowed:
- 6) ☒ Claim(s) 1, 5-7, 10 and 13-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments on p. 8, with regard to various objection(s), have been fully considered and are persuasive. The objections have been withdrawn.
2. Applicant's arguments on p. 8-9, with respect to the rejection(s) over Salkhi have been fully considered but they are not persuasive.

Applicant argues that Salkhi does not describe or teach a local clock that is not synchronized to the signal as claimed by Applicant. However, in ¶36, Salkhi teaches that the local clock is synchronized to within 0.25 ms of the signal. While Salkhi does consider the possibility that the synchronization might, "[i]n some instances ... degrade beyond 0.25 ms" (¶36, lines 8-10), Applicant's own invention also contemplates the possibility of a loss of synchronization: "If the result for the calculated position and time of the satellites is greater than the 0.5 ms range (620), then the satellites are acquired by conventional approaches (624) and processing is complete (626)." (¶67, lines 7-9). Thus, Salkhi appears to provide synchronization to the same degree that Applicant's invention does.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 3662

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 6-7, 10, and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Salkhi.

In regard to claims 1, 7, 10, and 13, Salkhi discloses:

a receiver receiving a signal having a plurality of pseudo-noise codes, where each of the pseudo-noise codes of the plurality of pseudo-noise codes originates from a GPS transmitter (§ 4);

a local clock with an error of less than 0.5 ms relative to a GPS time (§ 36); and

a decoder connected to the receiver and the local clock that is synchronized to the signal, identifies four pseudorange equations for at least four GPS transmitters from the plurality of GPS transmitters (§ 36), and determines a location of the receiver by simultaneously solving the pseudorange equations (§ 9), where at least three encompasses four.

In regard to claim 6, Salkhi further discloses a temperature sensor attached to a crystal in the local clock to take heat measurements of the crystal and reports heat measurements to the decoder to enable the decoder to adjust the local clock readings in response to heat measurements (§ 18-20).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 4 0. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Salkhi.

Salkhi discloses that synchronization to correct clock error is not necessary for a clock-bias of less than 0.5 ms relative to a GPS time. This allows faster acquisition. However, once the GPS signal is acquired, it would be obvious to correct the clock time error so that during the next iteration (when the position will be needed after a standby time) it is more likely that the clock-bias will be less than 0.5 ms at that time, so that the signal can be fast-acquired again. Otherwise, if the clock-bias is drifting at 0.3 ms an iteration, every other iteration a slow acquisition would be necessary.

- 5 1. The examiner also finds the following reference(s) relevant:

IDS document Kohli (US 6,125,325 A), which discloses a local clock with an error of less than 0.5 ms relative to a GPS time (col. 32, lines 52-63; col. 33, line 64 to col. 34, line 4; col. 34, lines 48-59).

Applicant is encouraged to consider these documents in formulating their response (if one is required) to this action, in order to expedite prosecution of this application.

Allowable Subject Matter

6. Claim(s) 2-4, 8-9, and 11-12 is/are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. **4. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred H. Mull whose telephone number is 571-272-6975. The examiner can normally be reached on M-F 9:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas H. Tarcza can be reached on 571-272-6979. The fax phone


Art Unit: 3662

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Fred H. Mull
Examiner
Art Unit 3662

fhm


THOMAS H. TARCZA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600